

**PROGRAM GUIDE
BACHELOR OF SCIENCE, ELECTRICAL AND COMPUTER ENGINEERING**

- ◆ All students are required to take a minimum combined total of 42 semester hours of General Education and Rowan Experience courses. *(Italics indicate prerequisites)*

GENERAL EDUCATION REQUIREMENTS (choice from Approved Gen Ed Guide)				
Transfer	Rowan	Hegis #	COMMUNICATIONS BANK <i>minimum 6 s.h.</i>	6 S.H.
		COMP01.111	College Composition I	3 s.h.
		COMP01.112	College Composition II (<i>College Composition I</i>)	3 s.h.
		Hegis #	SCIENCE/MATHEMATICS BANK <i>minimum 7 s.h.</i>	7 S.H.
			Math/Science (choice from Approved S/M General Education Courses)	3 s.h.
			Lab Science (choice from Approved S/M General Education Courses)	4 s.h.
		Hegis #	SOCIAL & BEHAVIORAL SCIENCES BANK <i>minimum 6 s.h.</i>	6 S.H.
			(choice from Approved SBS General Education Courses)	3 s.h.
			(choice from Approved SBS General Education Courses)	3 s.h.
		Hegis #	HISTORY/HUMANITIES/LANGUAGE BANK <i>minimum 6 s.h.</i>	6 S.H.
			(choice from Approved HHL General Education Courses)	3 s.h.
			(choice from Approved HHL General Education Courses)	3 s.h.
		Hegis #	NON-PROGRAM ELECTIVES <i>minimum 6 s.h.</i>	6 S.H.
				3 s.h.
				3 s.h.

ROWAN EXPERIENCE REQUIREMENTS (choose from Approved RE Guide) (Can be taken as a Gen Ed OR within the major requirements.)				
Transfer	Rowan	Hegis #		
		CMS 04205	Public Speaking (<i>College Composition I and II</i>)	3 s.h.
			Artistic/Creative Experience	3 s.h.
CHECK TO BE SURE THE FOLLOWING REQUIREMENTS ARE COMPLETED				
			Broad Based Literature Course (LIT)	
			Writing Intensive Course (WI) (<i>College Composition II</i>)	
			Multicultural/Global Course (M/G)	
			Lab Science Course (LAB) (S/M)	
			Computer Competency Exam or Computer Literacy Course	
			Rowan Seminar (RS) – <i>Freshmen Only</i>	

- ◆ **NOTE:** *M/G, LIT, ACE, WI and RS courses, if taken within the major program of study, CAN NOT COUNT towards the minimum total of Gen Ed 42 credits.*
- ◆ This information has been provided by the department listed above as of the date listed below and is subject to change.
- ◆ To declare this major go to the CAP Center in Savitz Hall.
- ◆ **Students should consult with their program advisor for suggested General Education and Rowan Experience courses.**

B.S. in Electrical and Computer Engineering

Program Requirements

Students should consult with their program advisor as some courses may apply as General Education and/or Rowan Experience.

Course #	COURSE NAME	S.H.	PREREQUISITES
COMP01.111	College Composition I	3 s.h.	Score of 530 or better on SAT
MATH01.140	Accelerated Calculus I	4 s.h.	Acceptance into Engineering Program
MATH01.141	Accelerated Calculus II	4 s.h.	MATH01.140
MATH01.235	Math for Engineering Analysis I	4 s.h.	MATH01.141
MATH01.236	Math for Engineering Analysis II	4 s.h.	MATH01.235
CHEM06.105	Adv. College Chemistry I	4 s.h.	None
ECON04.102	Intro to Microeconomics (This also counts as a Social and Behavioral Sciences General Education course)		None
PHYS02.200	Introductory Mechanics I	4 s.h.	MATH01.140 (co-requisite)
PHYS02.201	Introductory Electricity & Magnetism	4 s.h.	MATH01.141 & PHYS02.200
CS04.103	Computer Science and Programming	4 s.h.	Acceptance into Engineering Program
ENGR01.101	Freshman Engineering Clinic I	2 s.h.	Acceptance into Engineering Program
ENGR01.102	Freshman Engineering Clinic II	2 s.h.	ENGR01.101
ENGR01.201	Sophomore Engineering Clinic I	4 s.h.	ENGR01.102 & COMP01.111
ENGR01.202	Sophomore Engineering Clinic II	4 s.h.	ENGR01.201
ENGR01.301	Junior Engineering Clinic I	2 s.h.	ECE09.311 & ENGR01.202
ENGR01.302	Junior Engineering Clinic II	2 s.h.	ENGR01.301
ENGR01.401	Senior Engineering Clinic I	2 s.h.	ENGR01.302
ENGR01.402	Senior Engineering Clinic II	2 s.h.	ENGR01.401
ENGR01.271	Statics	2 s.h.	MATH01.141 & PHYS02.200
ECE09.201	Network I.	2 s.h.	MATH01.141 & PHYS02.200 & CS04.103 & MATH01.235 (co-requisite)
ECE09.202	Network II.	2 s.h.	ECE01.201
ENGR01.291	Dynamics	2 s.h.	ENGR01.271
ECE09.241	Digital I	3 s.h.	Acceptance into ECE
ECE09.242	Digital II: Microprocessors	3 s.h.	ECE09.443
ECE09.311	Electronics I	2 s.h.	ECE09.202 (min grade of C)
ECE09.301	Engineering Electromagnetics I	2 s.h.	ECE09.202 (min grade of C) & MATH01.236 & PHYS02.201
ECE09.302	Engineering Electromagnetics II	2 s.h.	ECE09.302
ECE09.351	Digital Signal Processing	3 s.h.	ECE09.321 (min grade of C)
ECE09.321	Systems and Control	3 s.h.	ECE09.202 (min grade of C) & MATH01.236
ECE09.331	Electrical Communications Systems	4 s.h.	ECE09.202 (min grade of C) & MATH01.235
CS04.225	Data Structures for Engineers	3 s.h.	CS04.103
ECE09.443	Computer Architecture I	2 s.h.	ECE09.241 (min grade of C)
ECE09.498	Seminar: Engineering Frontiers 1 s.h.	1 s.h.	Senior status in ECE
ECE09.360,362 460,462	Clinic Consultant I, II, III, IV	1 s.h. ea	ECE09.202 (min grade of C) & MATH01.236

Other Major Electives

	EE Core Elective (1)	3 s.h.	<i>Prerequisites appropriate to individual course.</i>
	ECE Elective (1)	3 s.h.	
	CpE Elective (1)	3 s.h.	
	CpE Core Elective (1)	3 s.h.	
	Technology Focus Electives (2)	6 s.h.	

Total Credits in Program128 S.H.

Suggested Course Sequence

PLEASE NOTE: Considerable flexibility exists for moving courses between spring and fall semesters, except when a course is only offered in spring or fall (noted in some Specialization Courses). When altering course sequences, give careful consideration to prerequisites.

FIRST SEMESTER			SECOND SEMESTER		
COMP 01.111	College Composition I	3	CS04.103	Computer Science and Programming	4
MATH01.140	Accelerated Calculus I	4	MATH01.141	Accelerated Calculus II	4
CHEM06.105	Adv. College Chemistry I	4	PHYS02.200	Introductory Mechanics I	4
ECE09.241	Digital I	3		General Education I	3
ENGR01.101	Freshman Engineering Clinic I	2	ENGR01.102	Freshman Engineering Clinic I I	2
Total Credits		16	Total Credits		
THIRD SEMESTER			FOURTH SEMESTER		
PHYS02.201	Introductory Electricity & Magnetism	4	ENGR01.271	Statics	2
MATH01.235	Math for Engineering Analysis I	4	ENGR01.291	Dynamics	2
ECE09.201	Network I.	2	MATH01.235	Math for Engineering Analysis I	4
ECE09.202	Network II.	2	ECE09.311	Electronics I	2
ENGR01.201	Sophomore Engineering Clinic I	4		General Education II	3
			ENGR01.201	Sophomore Engineering Clinic I	4
Total Credits		16	Total Credits		17
FIFTH SEMESTER			SIXTH SEMESTER		
ECE09.301	Engineering Electromagnetics I	2	ECE09.242	Digital II: Microprocessors	3
ECE09.302	Engineering Electromagnetics II	2	ECE09.351	Digital Signal Processing	3
ECE09.321	Systems and Control	3	ECE09.331	Electrical Communications Systems	4
ECE09.443	Computer Architecture I	2	CS04.225	Data Structures for Engineers	3
ECON04.102	Intro to Microeconomics (General Education III)	3	ECE09.362	Clinic Consultant II	1
ECE09.360	Clinic Consultant I	1	ENGR01.302	Junior Engineering Clinic II	3
ENGR01.301	Junior Engineering Clinic I	2			
Total Credits		15	Total Credits		17
SEVENTH SEMESTER			EIGHTH SEMESTER		
	CpE Core Elective	3		Technology Focus Elective	3
	CpE Elective	3		ECE Elective	3
	EE Core Elective	3		General Education IV	3
	Technology Focus Elective	3		General Education V	3
ECE09.460	Clinic Consultant III	1	ECE09.498	Seminar: Engineering Frontiers	1
ENGR01.401	Senior Engineering Clinic I	2	ECE09.462	Clinic Consultant IV	1
			ENGR01.402	Senior Engineering Clinic II	2

Total Credits		15	Total Credits		16
Total Credits			Total Credits		

NOTES OR COMMENTS